

17. PEGASUS BAY RECREATIONAL REEF TRUST

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The purpose of this report is to update the Board on the concept of artificial surf reefs and the recent establishment of the Pegasus Bay Recreational Reef Trust.

INTRODUCTION

In July 2000 a seminar was held to introduce a new form of coastal engineering promoted by a New Zealand company Artificial Surf Reefs (ASR). The information was well received by the 25 people attending. Currently existing information on our coast and wave environment is being collated to allow an estimate to be sought on the costs and benefits of offshore reefs for Christchurch.

BACKGROUND

Coastal protection and engineering historically has focused on protecting the land from erosion. However, seawalls have often accentuated storm erosion by reflecting wave energy. ASR has developed a new form of protection for beach areas by artificially creating offshore reefs, which break and dissipate wave energy before it gets to the shore. This concept of copying natural systems allows for protection but also provides recreation and ecological benefits. A PowerPoint presentation will be shown at the meeting covering technical aspects and design examples.

Christchurch already has a good amount of information on coastal processes and our wave climate. Canterbury University has studied the coast for at least 25 years with various studies and reports produced. A \$50,000 wave study was also undertaken in 1996/97 and currently a wave buoy is stationed off Banks Peninsula giving real-time information. Environment Canterbury staff are also surveying the coast regularly and some data is available on bed levels around the Pier and Sumner Bay.

CURRENT SITUATION

No Council funding is available for reef investigations but existing information is being collated. A Trust has been formed to help raise the necessary funds to produce a concept design.

A group of surfers including Jonathan Ogden and Russell Ritchie have formed the Pegasus Bay Recreational Reef Trust and have produced reef supporter cards. These are selling for \$10 and go into a draw to win two surfboards and a 5% discount at many local retailers. This fundraising effort is designed to help fund the research required to develop the concept of and consent for a reef at New Brighton. Surfing and related beach use is a growing form of recreation and has been said to exceed rugby in terms of participation. Support for a surf reef was also the second priority in submissions on the recent Coastal Parks Strategy behind planting and beach landscape work.

Preliminary discussions suggest that because of our existing information the costs of concept design work and consents for a reef at New Brighton could be reduced from \$140,000 to \$50,000. Sumner is more complex and will require more data and modelling and design costs could exceed \$150,000. Estimates for construction are \$2 million for Sumner (including beach creation) and \$500,000 for a recreational reef at New Brighton. These figures are only estimates of costs and will depend on the scale and size of the reefs.

The modelling can design certain wave types and heights and this also affects the final costs.

A resource consent will be required from Environment Canterbury prior to any work proceeding.

CONCLUSION

ASR has completed construction of its first surf reef at Surfers Paradise and many designs are underway around New Zealand and the world. A consent has been granted in Mount Maunganui to build one and construction is hoped to start soon. Christchurch has a large coastal area and also a large population of residents and visitors keen to participate in this form of recreation. While this type of coastal engineering is new, the creation of a beach at Sumner and new recreational surfing opportunities at New Brighton would create a unique feature for Christchurch and the concept is considered worthy of further investigation.

If a New Brighton reef was the first site to be developed, the Pegasus Bay Recreational Reef Trust may be able to raise substantial funds towards the planning stage. Construction costs are not in our current Parks and Waterways Annual Plan Capital Programme.

Recommendation: That the information be received.

Chairperson's

Recommendations:

1. That the information be received.
2. That the Board support the Pegasus Bay Recreational Reef Trust in initiating the feasibility study for an artificial reef at New Brighton.